

McMinn Avenue Superfund Site Work Plan

North Coast Regional Water Quality Control Board

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1.0 Background

The McMinn Avenue Site is located in Sonoma County (County), in the southwest area of Santa Rosa, west of Highway 101 and south of Highway 12. The City of Santa Rosa (City) has annexed some of the affected area, but much of the site remains within the unincorporated area. Most of the contamination originates along Sebastopol Road between Highway 101 and Kenmore Lane.

The North Coast Regional Water Quality Control Board (Regional Water Board) staff first became involved in investigating petroleum and solvent contamination in the area in 1981. In 1984, the Department of Toxic Substances Control (DTSC), which served as lead agency for the site through 1995, created the McMinn Avenue Superfund Site, as a circle encompassing a large portion of the known contaminated area in the Roseland District. After 1995, DTSC referred oversight of the area to the Regional Water Board, which continues to serve as lead agency to investigate, cleanup, and abate the contamination. In addition, the Regional Water Board continued to work in coordination with the US Environmental Protection Agency (US EPA) and DTSC in a continuing consulting role, along with several local agencies. The "McMinn Avenue Site Fact Sheet Number 9," (Fact Sheet 9) dated November 2000, and attached as Appendix 1, presents a concise summary of the history and activities conducted in the area through the end of 2000.

Considerable investigation, cleanup and abatement activities have occurred within the area. Thirty-eight sites have been identified as source areas for some, but not all, of the contamination in the area. Of these 38 sites, thirteen petroleum-contaminated sites in the area have completed investigation and cleanup activities and have been issued case closure letters. A few of these sites have residual petroleum hydrocarbon contamination remaining, which is expected to naturally degrade in a few years. Some sites also have halogenated volatile organic compound (HVOC) contamination in wells, the sources of some still unknown and being investigated. The 13 sites that have completed petroleum hydrocarbon cleanup are:

1. Continental Baking, 1840 Sebastopol Road
2. Gardner's Aid, 1050 Sebastopol Road
3. Harriman Brothers, 375 Sebastopol Road
4. Laidlaw Transit, 959 Sebastopol Road
5. Murrill Trucking, 439 Roseland Avenue
6. NorCal Glass, 673 Sebastopol Road
7. Talmadge Wood, 1594 Hampton Way
8. Yellow and Roadway Freight, 270 Dutton Avenue
9. Withers Car Wash, 1450 Sebastopol Road
10. Kevin Chang, 1580 Hampton Way
11. Shamrock Materials, 285 Roberts Avenue
12. Dave Zedrick, 111 Sebastopol Road
13. Santa Rosa Value Center, Sebastopol Road at Stony Point Road

Another 26 sites are still conducting investigation and cleanup activities of all contaminants. In addition, there are several small HVOC plumes located within the McMinn State Superfund Area where no responsible parties have yet been identified. The Regional Water Board is continuing work

efforts to determine the likely source(s) of the contamination, and identify responsible parties for taking cleanup and abatement activities.

One large area of HVOC contamination originates near the intersection of West Avenue and Sebastopol Road. Work in this area has been conducted under the "Plan of Action for HVOC Investigation and Mitigation in the Roseland Area," (Plan of Action) an agreement first negotiated in 1999 and attached as Appendix 2.

The Roseland Plan of Action agreement was structured to move forward with investigation of this large HVOC plume. Three parties signed the agreement in 1999: Regional Water Board, the County of Sonoma (County), and the South Park County Sanitation District (SPCSD). The major points of this agreement provided for the investigation of the HVOC plume and to connect selected properties to the municipal water system. This included connecting 18 pre-selected properties in the area designated as the "Red Zone" to the municipal water system. A related mitigation activity was the installation of a water main in Emmy Lou Court and subsequent connection to the municipal water system for these residents.

2.0 Purpose

The purpose of this workplan is to coordinate investigative and remedial efforts within the McMinn State Superfund Area and to respond to provision II(4) of the Plan of Action. This provision states: "As required by the NCRWQCB in order to cover administrative costs for ensuring progress in investigation, cleanup, outreach, and potentially responsible party identification in the HVOC plume area and *coordinating such efforts as they relate to similar efforts in the larger McMinn Avenue Superfund Site*, which payment would be required in a Cleanup and Abatement Order, SPCSD/County shall pay to the NCRWQCB \$125,000 per year for a period of five years, commencing on September 1, 1999 to help defray its costs associated with the above tasks..." [Italicized emphasis added]

3.0 Work Plan

This work plan is intended to provide an outline of the proposed tasks to be completed by the Regional Water Board to coordinate investigative and remedial efforts within the McMinn State Superfund Area.

Overall, the main thrust of the proposed work is to evaluate data produced by the HVOC investigation and other investigations within the McMinn State Superfund Area, identify potential responsible parties, improve coordination and information sharing between Dischargers and with Local Agencies, and improve community outreach. As a subset of these main tasks, the Regional Water Board will also maintain a comprehensive domestic well sampling database, to gain a better understanding of groundwater quality in the McMinn Avenue Superfund Site, including the adjacent Blue Zone. Each of these tasks is defined in the following sections in more detail.

4.0 Current Milestones

- Investigation of HVOC plume, under Plan of Action, February 2002.
- Issuance of Cleanup and Abatement Order (CAO) for Sebastopol Road Commingled Plume Group, January 2003.
- Investigation by Sebastopol Road Commingled Plume Group in the area near and at Roseland Elementary School, October 2002
- Issuance of 13267 Order for investigation of HVOC discharge at former Roseland Cleaners, 761 Sebastopol Road, November 2002.
- Receipt of Workplan for investigation at former Roseland Cleaners, 761 Sebastopol Road, December 2002.
- Issuance of 13267 Order for investigation of HVOC discharge at former Holland Cleaners, 700 Sebastopol Road, January 2003.
- Provide detailed accounting for oversight costs to County of Sonoma for Regional Water Board work on Sebastopol Road at West Ave HVOC plume, September – December 2002 and ongoing.
- Use of computerized time tracking system to track Regional Water Board staff time on Sebastopol Road at West Ave HVOC plume, December 2002.
- Completion of data acquisition and data entry for Coordinated Monitoring Program for McMinn State Superfund Area. December 2002.
- Update of this Workplan, December 2002.
- Meetings with County of Sonoma to discuss Plan of Action and other issues related to Sebastopol Road at West Avenue HVOC Plume, September – December 2002 and ongoing.

5.0 Sebastopol Road at West Avenue HVOC Plume

The County and SPCSD have conducted extensive investigations under the Plan of Action, including completion of numerous workplans and intermediate reports, culminating in the final Remedial Investigation Report delivered on February 14, 2002. In addition, the Plan of Action includes annual soil gas and indoor air sampling at the Roseland Elementary School, the submittal and implementation of a community Outreach Plan, and provisions which provide for the connection of additional properties to the municipal water system if it is found that they are “affected or threatened by the HVOC plume.” The end goal of the work described in the Plan of Action is several-fold, as described below:

1. Minimize potential exposure to contaminated groundwater and soil gas in the HVOC plume area.
2. Improve public education and outreach regarding contamination issues.
3. Define the extent of HVOC contamination originating from the area of West Avenue and Sebastopol Road.
4. Provide long term solutions for the mitigation of the HVOC contamination.
5. Locate additional responsible parties so that they can assist in implementation of the long-term solution to the HVOC contamination.
6. Coordinate work for ensuring progress in cleanup and abatement, outreach, and responsible party identification in the greater McMinn Avenue area.

Currently, the Regional Water Board allocates approximately \$100,000 per year for the staff costs associated with work on the Roseland Action Plan and for ensuring progress in investigation and cleanup of the larger McMinn Avenue Superfund Site. The additional \$25,000 per year has been used to supplement our laboratory budget for costs related to sampling in the McMinn Superfund area. Unspent laboratory allocation may be reallocated to staff costs. An accounting of expenditures to date by the Regional Water Board is attached in Appendix 3.

6.0 Petroleum Contamination Plumes

Other contaminants are commingled, both laterally and vertically, with the HVOC plume. These contaminants are primarily petroleum hydrocarbons and associated additives (for example, MtBE and 1,2-dichloroethane) but also include carbon tetrachloride and Freon 12. Near the major HVOC source area, the HVOCs are commingled with extensive petroleum hydrocarbon contamination from the former Redwood Oil BP service station at 760 Sebastopol Road. Downgradient of the major HVOC source area, the HVOCs are partially commingled with petroleum hydrocarbon contamination that originates from the following three underground storage tank sites:

- The former Redwood Oil BP service station at 760 Sebastopol Road,
- The former Flying A service station at 805 Sebastopol Road,
- The current Beacon (Tesoro) service station at 921 Sebastopol Road.

Information from the numerous wells and borings installed in the HVOC Plume area indicate that the extent of commingling of the HVOC plume with the petroleum hydrocarbon plume decreases with distance from the HVOC source area. The lighter hydrocarbons tend to remain near the upper portion of the shallow aquifer while the denser HVOCs sink through the upper aquifer and tend to be found primarily in an underlying aquifer. Nevertheless, hydrocarbons, especially benzene and MtBE, are also found in underlying aquifers either commingled with HVOCs or separately.

Coordinated efforts between the three fuel hydrocarbon sites have resulted in the formation of the Sebastopol Road Commingled Plume Group. The Commingled Plume Group is funded by the State Board's Commingled Plume Account in the underground storage tank cleanup fund. Active soil and groundwater remediation systems are operating at the Beacon station and the former Redwood Oil BP station. In 2001, staff required the Commingled Plume Group to complete the investigation of the extent of contamination from the three sites. The Commingled Plume Group submitted a workplan to the Regional Board in January, 2002. The workplan included key work to define the full extent of the contamination attributable to these sites.

7.0 Other Contaminant Plumes

Two additional former dry cleaners are under investigation by the Regional Water Board as possible source areas of HVOCs. These two dry cleaners were located in the former 200 and 300 blocks of Sebastopol Avenue. These locations are now under the Highway 12 and Highway 101 interchange. Additionally, cooperation between the Commingled Plume group, County of Sonoma, the SPCSD, and other nearby hydrocarbon and HVOC sites will be necessary to:

- (1) Complete the investigation of the extensive contamination underlying this portion of the McMinn State Superfund Area, and
- (2) To design effective and feasible remediation systems to cleanup the contamination and to restore the beneficial uses of groundwater in the area, including domestic supply.

New information, obtained from staff investigation or from existing sites within the area, is evaluated to determine if it may indicate new/additional contaminant source areas and appropriate action is taken.

8.0 Review of Area-wide Investigation Results

The caseworkers for sites within the McMinn State Superfund Area review submitted workplans, reports and correspondence and respond with comments when appropriate. An overall comprehensive overview of the McMinn State Superfund Area is kept in mind and appropriate suggestions are made to the Responsible Parties, as to what existing information may be available from nearby sites in an attempt to coordinate efforts at related sites.

9.0 Identification of Potential Responsible Parties for Identified Contaminant Plumes

As the domestic well sampling program and other investigations progress, additional data will become available that may assist the Regional Water Board in identifying new responsible parties.

Specifically, this information may be used to identify the source(s) of detections of HVOCs and/or petroleum hydrocarbons that have not yet been attributed to a specific source or sources. To conduct this task, the following basic steps will be followed:

1. Identify areas of groundwater contamination that cannot be directly attributable to any source area(s).
2. Conduct a file review of potential source areas and identify if the contamination originating from these source areas has been fully defined. If not, direct responsible parties to conduct additional investigation.
3. If no responsible party can be readily identified, conduct additional domestic or monitoring well sampling to identify potential source areas. Conduct historical review of activities in the vicinity of the contamination.
4. If additional sampling and historical review is inconclusive, evaluate alternatives to identify the source areas, including: (1) direct multiple potential responsible parties to conduct a joint investigation, or (2) conduct an investigation using Regional Water Board staff and/or the staff of other partner agencies (e.g. US EPA).
5. Upon identification of a responsible party, direct responsible party to conduct additional investigation.
6. Ensure that the identified responsible party fully defines the horizontal and vertical extent of contamination and mitigates the groundwater contamination in an expeditious fashion.

10.0 Updating/Issuing New Regional Water Board Orders

Sites that have existing Orders will be evaluated to determine if those orders need to be updated to reflect changes in: site conditions, Responsible Parties, required work, monitoring and reporting programs, or other requirements. Sites without current Orders are being evaluated as information develops, to determine if an Order needs to be issued. Existing and pending Orders in the area include:

Site Name	
Current Orders	Necessary Action
Sebastopol Road Commingled Plume Group (BP/Redwood Oil, Beacon Station #489, Wilson Baugh Enterprises)	
BP/Redwood Oil CAO 92-52, Beacon Station CAO 94-118.	Combined CAO to be issued January 2003.
Sebastopol Road At West Ave Plume	
No Orders. Plan of Action for HVOC Investigation and Mitigation in the Roseland Area, July 1999	CAO remains an option for this site.
Allefax Investments	
No Orders.	CAO pending.
Shell Station & Shell , DZ Inc.	
CAO 98-28 & CAO 97-59	Implementation of Corrective Action Plan. Assist with commingled plume application.
Triple S Tires	
CAO 93-44	Update CAO, assist with commingled plume application with adjacent sites, and implement corrective action.
Redwood Oil Bulk Plant	
CAO 90-58	Update CAO and implement corrective action.
Holland Cleaners, 700 Sebastopol Road	
Draft CAO was not issued.	13267 Order to be issued January 2003
Point St. George Fisheries	
CAO 85-87	Complete soil cleanup on site, revise CAO
Bill's Texaco	
CAO 89-144	Update CAO to reflect new Monitoring and Reporting Schedule, and update findings.
Roseland Cleaners, 761 Sebastopol Road	
13267 Order issued November 2002	RP is currently in compliance and has submitted Workplan that is being reviewed.
Sebastopol Avenue/Holland Cleaners #1 PCE Plume	
No Orders	Research historical and present owners and uses to determine responsibility for orphan HVOC plume.
Almetco	
CAO 86-195	Update order to reflect recent fieldwork and

	findings.
Acme Auto Wrecking	
CAO 97-33	Workplan for investigation of MtBE needs to be implemented, pending review of fieldwork recently done by Almetco on neighboring parcel.
Bevan Investments	
CAO 94-25	Complete investigation of MtBE plume and implement corrective action. Revise CAO.
Reuben's Tacos	
CAO 94-47	Require revised feasibility study/corrective action plan.

11.0 Area-Wide Coordination

In an effort to coordinate investigative and remedial work at sites with commingled contaminant plumes, or at related sites, the Regional Water Board will make copies of pertinent reports to share, and hold meetings as necessary. When reviewing workplans an overall integrated view of the area will be employed to ensure that efforts at related sites will be mutually beneficial.

In areas with commingled plumes, cooperation between different Sites will be directed. Investigative work, pilot tests, feasibility studies, and remediation, will need to address all constituents in a commingled plume. For example, if numerous sites have discharged HVOC and petroleum hydrocarbon contamination that have commingled into one plume, then efforts must be beneficial for both components of the plume; one effort must not exacerbate the other.

12.0 Community Outreach

Community outreach involves Regional Water Board staff participation and attendance at community meetings, occasional presentations at the Roseland Elementary School, and regular communication with members of the Roseland community. Included in community outreach is attendance at the Roseland Subcommittee Meetings, and other related community meetings. Finally, this includes updates on the progress of the investigation to the Regional Water Quality Control Board members and periodic updates of the "McMinn Fact Sheet" for the community in Roseland.

Outreach by Responsible Parties with Sites within the McMinn State Superfund Area will also be required. Meetings will be held to update the community on recent events at the relevant sites. Alternatively, fact sheets can be produced and sent to residents, businesses and interested parties within the McMinn State Superfund Area.

Meetings and fact sheets should be produced periodically and near significant events.

13.0 Address Community Health Concerns

During numerous public meetings and correspondence, the effect of exposure to contaminated groundwater has been the focal point of community concerns. The Regional Water Board will

continue to work to insure that community health concerns are directed to qualified personnel at the County and/or State Environmental Health departments.

14.0 Development & Maintenance of Domestic Well Database

A domestic well database (database) has been developed to assist the Regional Water Board in tracking sample results, locations of domestic wells, construction details of domestic wells, and domestic wells that have not yet been sampled.

Currently, a rudimentary database has been created that holds all of the domestic well sampling information for the Roseland area that has been collected since the implementation of the Plan of Action, and also includes sampling data from as far back as 1986. It includes results of door to door surveys of all properties that we believe may have a well in the Roseland area. The Roseland area includes the Red, Yellow and Blue zones, as well as the McMinn State Superfund Area. These surveys have produced a comprehensive list of verified domestic wells, contact information for each property, what the well is used for, and if there is a city water connection.

However, this database is in the process of being restructured to accommodate long term goals such as enabling it to be integrated with a geographic information system (GIS), and provide a comprehensive repository for all relevant information about each well in the Roseland area. The following tasks remain to be completed:

1. Complete restructuring of the database to allow input of domestic well and monitoring well information.
2. Scan in all available well logs for each verified domestic well and attach them to the appropriate record in the database (for Regional Water Board use).
3. Input all remaining or discovered historical analytical information into the database.

15.0 Coordinated Monitoring and Domestic & Monitoring Well Sampling Programs

A coordinated program for monitoring well sampling and/or water level measurements was ordered at 15 sites within the McMinn State Superfund Area, and was in force from August 2001 to September 2002. Approximately 180 reports have been submitted. The purpose of the coordinated monitoring program is to give a more complete picture of groundwater quality over a greater area at given points in time within the McMinn State Superfund Area. At this point in time (January 2003) all of the reports have been received. The data has been entered into a database, and is currently being analyzed. The data and analysis will be made available to the public.

The Regional Water Board may sample domestic wells and monitoring wells as deemed necessary to complete data gaps. Domestic wells will be identified and sampled in areas with suspected contamination to enhance knowledge of groundwater contamination in the area and to help locate contaminant source areas. The Regional Water Board may also sample investigative borings being installed at current contaminated sites in the area.

16.0 Timeline for Sites

The projected timeline for identified Sites within the McMinn State Superfund Area is below. This timeline consists of a list of Regional Water Board Sites and corresponding requirements that need to be accomplished by the dischargers at each site. Most dischargers are well into investigating and mitigation of the contamination at/from their sites. The Regional Water Board prioritizes sites by the magnitude of threat to waters of the State and expends time and effort on them accordingly. Maximum effort is concentrated on the most seriously contaminated sites with the highest threat to groundwater, while less time may be spent on sites that have very low contamination threat. Below is a table of sites within the McMinn State Superfund Area. Highest priority sites are listed at the top, and necessary actions and scheduled dates are listed. The timeline is a general guidance document to direct work products but it is subject to change.

17.0 Regional Water Board Site Timeline Table

PCA Code or Prog.	Site Name	Regional Water Board Action	Date	Discharger Action	Date
UST, SLIC CR, 162-01	Sebastopol Road Commingled Plume Group (Wilson Baugh Enterprises, Beacon Station #489, BP/Redwood Oil)	Issue updated (CAO) that combines the three sites that make up the Sebastopol Road Commingled Plume Group.	January 2003	Continue with current investigation and comply with CAO when it is issued. Coordinate with County of Sonoma on monitoring, investigation and cleanup.	Immediate
162-01, SLIC	Sebastopol Road At West Ave Plume	Facilitate meetings with County of Sonoma and Sebastopol Road Commingled Plume Group to coordinate investigation, sampling and mitigation efforts.	Ongoing	Coordinate with Sebastopol Road Commingled Plume Group to investigate and mitigate commingled HVOC and petroleum hydrocarbon contaminant plume.	Immediate
SLIC, UST	Allefax	Issue CAO and work cooperatively with City of Santa Rosa and County of Sonoma on investigation of site.	Immediate Issue CAO February 2003.	Comply with orders to cleanup groundwater and surface discharges	Immediate.
SLIC CR	Shell Station & Shell DZ., Inc.	Issue 13267 letter ordering alternate water supply for 258 and 270 Dutton Avenue. Assist with commingled plume application.	January 2003	Supply alternative water supply (city water) to MtBE contaminated wells at 258, and 270 Dutton Avenue. Implementation of Corrective Action Plan.	Immediate
SLIC CR, UST	Quik Stop, Taylor Bus Co., Triple S Tires	Assist with application to Commingled Plume Fund as appropriate.	March 2003	Complete investigation of extent of contamination and implement corrective action.	June 2003
SLIC CR	Redwood Oil Bulk Plant	Update CAO	April 2003	Implement corrective action	June 2003
162-01, SLIC	Holland Cleaners, 700 Sebastopol Road	Issue 13267 Order to require investigation of contaminant plume. Determine Responsible Party Status of New Century Title Company and issue appropriate letter.	January 2003	Comply with requirements in 13267 Order.	March 2003
SLIC CR	C&D Batteries	Review Remedial Action Plan and draft public notice. Issue Waste Discharge Requirements if appropriate. Meet with dischargers.	February 2003	Update / Implement remedial action plan. Submit site conceptual model. Submit report of waste discharge if necessary.	June 2003
SLIC CR	Point St. George Fisheries	Require soil cleanup. Comment on reports. Notice completion of Corrective Action for soil. Update CAO.	April 2003	Continue work and compliance with Regional Water Board requirements.	Ongoing
UST	Exchange Bank Data Center	Issue Waste Discharge Requirement Permit (WDR) for groundwater cleanup.	May 2003	Submit report of waste discharge. Implement and comply with WDR.	March 2003
UST	Bill's Texaco	Review soon to be submitted RAP, and respond.	March 2003	Submit RAP.	February 2003
162-01, SLIC	Roseland Cleaners	Issue 13267 Order to require investigation of contaminant plume.	December 2002	Comply with requirements in 13267 Order.	December 2002

162-01, SLIC	Sebastopol Avenue/Holland Cleaners #1 PCE Plume	Investigate historical uses of area and to determine responsibility for orphan HVOC plume. Issue 13267 Order to Responsible Party if appropriate.	March 2003		
UST	Unocal	Require completion of MtBE investigation and corrective action plan	May 2003	Complete MtBE investigation and submit corrective action plan	August 2003
162-01, SLIC	Almetco	Review soon to be submitted report on chromium contaminated soil removal at site. 2/28/03 Evaluate workplan for delineation of groundwater contamination. 3/15/03	March 2003	Submit workplan for additional required work by	April 2003
162-01, SLIC	Acme Auto Wrecking	Copy report of Almetco recent work to Acme Auto Wrecker's to assist with their investigation of recently discovered MtBE contamination in onsite groundwater.	January 2003	Comply with existing CAO; Define extent of MtBE contamination to groundwater.	March 2003
UST	Bevan Investments	Revise CAO	May 2003	Complete investigation of MtBE plume and implement corrective action.	July 2003
SLIC CR	Reuben's Tacos	Require revised feasibility study/corrective action plan	June 2003	Implement corrective action	August 2003
UST	Frontier Electric	Review soon to be submitted report on installation of monitoring wells.	March 2003	Sample monitoring wells and submit quarterly reports.	Ongoing
UST	Roseland Paint	Evaluate site for closure, pending field work results	June 2003		
UST	Slakey Bros.	Evaluate site for closure, pending field work results	June 2003		
SLIC	McGowan	Evaluate extent of contamination pending field work results	August 2003		
SLIC	Wescott's Auto & Truck	Continue to review Industrial Stormwater Permit compliance.	Ongoing	Continue to comply with Industrial Stormwater Permit and improve Best Management Practices.	Ongoing